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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,736	12/02/2003	Kyung Chul Woo	0465-1106P	2082

2292 7590 11/02/2007
BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

PATEL, RITA RAMESH

ART UNIT	PAPER NUMBER
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1792

NOTIFICATION DATE	DELIVERY MODE
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11/02/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/724,736

Applicant(s)

WOO ET AL.

Examiner

Rita R. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6 and 8-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6 and 8-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/20/07 has been entered.

Response to Applicant's Arguments / Amendments

This Office Action is responsive to the RCE filed on 8/20/07. Claims 1, 3, 4, 6, and 8-14 are pending. Claims 2, 5, and 7 have been cancelled. Claims 1, 11, and 14 have been amended. In light of the amendments made to the claims, the former art rejection has been withdrawn, however, upon further consideration, the instant claims are rejected under new grounds of rejections and thus, claims 1, 3, 4, 6, and 8-14 are rejected for the reasons of record.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 4, 6, and 8-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More specifically, in claims 1, 11, and 14 Applicant has claimed in the last line of these claims, the following: "the water of which is electrically neutral". However, it is not delineated what water Applicant is making reference to-is this water a reference to the electrically charged re-circulated wash water or the wash water found in the wet laundry?

Additionally Applicant's claim for electrically neutral water is insufficient in that the water itself, the actual molecule may be neutral, however, the wash solution is in practice not neutral since wash water inherent has exposure to oxygen and Applicant intimates the use of soaps, detergent, etc. It is unclear what Applicant means by their claim for electrically neutral water. Is Applicant claiming that the molecular composition of the water molecule is neutral? Or is Applicant claiming that the wash solution (water plus soaps, detergent, etc.) is neutral? Clarification is requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 10, 11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sweeney (US Patent No. 5,928,490).

Sweeney teaches a laundry treatment system which is connected a tank for discharging used water for filtration and recirculation to the washer and an electrolytic cell therein for producing mixed oxidants dissolved in the make up water for oxidizing deleterious components without damaging the fabric being washed (col. 3, lines 39-47). Furthermore, pumps are used to recirculate and discharge water, more specifically in Sweeney it is indicated that pumps 37 and 42 are somewhat redundant and can be combined by use of appropriate piping and control valves so that a single pump can recirculate water during operation of the cell and then circulate treated water to the holding tank when a new wash cycle is ready to begin (col. 6, lines 29-34). The circulated oxidant treated wash water is supplied to the washing machine upon commencement of a wash cycle (claim 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, and further in view of Johnson et al. herein referred to as "Johnson" (US Patent No. 3,361,356).

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Sweeney teaches the claimed invention having an external power supply (col. 5, line 59) except fails to go into detail regarding the power supply. However, Johnson teaches a watering control system employing electrodes 58, 64 having a power system comprising an electrical energy source of AC current 92, 94, a step-down transformer 96, voltage lines 98, 100, a full wave rectifier 102, a DC control voltage, and a transformers 108. Johnson teaches this is a known way for powering electrodes in a system which electrolyzes water. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the power supply as fully detailed in Johnson in the invention of Sweeney, since it is a known means for powering an electrode system which satisfies the operation of electrodes use in water.

Claims 6, 8, 9, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney further in view of Arai et al. herein referred to as "Arai" (US Patent No. 6,886,371).

Sweeney teaches the claimed invention, except fails to teach the implementation of an ultrasonic wave generator. However, Arai teaches a washing machine having a supersonic resonator, which is driven by an oscillator to generate supersonic vibration and a supersonic vibration horn. A washing liquid is fed to the partial washing apparatus so as to be agitated by supersonic waves, which are then fed to an article to be washed to achieve partial washing of the article. The partial washing apparatus is detachably fitted to the washing machine proper at approximately the center of a lid of the washing machine proper. The partial washing apparatus may be used as a handy-type partial

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washing apparatus when held at a grip portion of the partial washing apparatus (Abstract). Supersonic resonator 12 and supersonic vibration horn 13 of Arai read on applicant's claim for a means for generating an ultrasonic wave in the water. Vibration horn 13, as seen in Figure 6 has opposing side walls which may read on applicant's claim for a pair of ultrasonic vibration plates. It would have been obvious to one of ordinary skill in the art at the time of the invention to use ultrasonic vibration plates in the recirculation system of Sweeney, either proceeding or following the electrode assembly since Sweeney and Arai are inventions of the same art. Also Arai provides means for enhancing desired cleaning functions as taught by the washing machine of Sweeney; applying advanced cleaning means to Sweeney is within the scope of the invention.

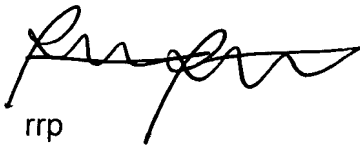
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita R. Patel whose telephone number is (571) 272-8701. The examiner can normally be reached on M-F: 9-6.

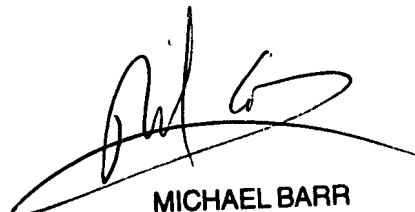
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



rrp



MICHAEL BARR
SUPERVISORY PATENT EXAMINER